

DOI Work Activity 4P: Maintain Hydropower Facilities

Program Area:	Maintenance
End Outcome Goal:	UEO 1 - ENERGY - Manage or Influence Resource Use to Enhance Public Benefit, Responsible Development, and Economic Value
Intermediate Outcome:	UIO 1.1 (Hydropower) - Operate and Maintain Reliable, Safe and Secure Power Facilities
DOI Sub process:	4c – Provide facilities

Examples/Notes: **Maintenance** is the upkeep of constructed facilities and structures and capitalized equipment necessary to realize the originally anticipated useful life of the fixed assets. Methods of accomplishing Maintenance are:

1. **Annual Maintenance** is Maintenance performed to repair failures during the year in which they occur. Includes preventive and/or cyclic maintenance performed in the year in which it is scheduled to occur. Annual Maintenance can be preformed through:

Repair: Work to restore a damaged, broken, or worn-out facility, facility component, or item of equipment to normal operating condition.

Preventive Maintenance: Scheduled servicing; repairs; inspections; adjustments; and replacement of parts that result in fewer breakdowns and fewer premature replacements and achieve the expected life of facilities and equipment

Cyclic Maintenance: Preventive maintenance activities that recur on a periodic and scheduled cycle of greater than 1 year.

2. **Deferred Maintenance** is Maintenance that was not performed when it should have been or when it was scheduled and which, therefore, was put off or delayed for a future period. This also includes work performed to correct facilities deficiencies where there is noncompliance to codes (e.g. life safety, ADA, OSHA, environmental, etc.) and other regulatory or Executive Order compliance requirements. Deferred Maintenance can be preformed through:

Repair: Work to restore a damaged, broken, or worn-out facility, facility component, or item of equipment to normal operating condition.

Rehabilitation (without expansion or change of function): Renovation of an existing facility or any of its components in order to restore and/or extend the life of the facility.

Replacement: Substitution or exchange of one existing facility, facility component, or item of equipment for another having the capacity to perform the same function.

Demolition: Dismantling and removal, or surplus of a deteriorated or otherwise unneeded facility or item of equipment, including necessary clean-up work.

Work Activity Description: Includes all work necessary to maintain and extend the life of the physical plant infrastructure to provide generation capability, reliability, availability, and transmission on a long-term basis. Examples include circuit breaker replacements, overhaul of generating units, refurbishment of ring gate seal and maintenance expenses and the maintenance portion of joint costs. This activity entails performing Maintenance or Deferred Maintenance on existing facilities and the use of a Facilities Management Systems (FMS) to ensure that data (including costs) accurately reflects the level(s) of work performed. This activity includes all types of work and effort to needed to maintain and repair these type facilities. These costs include material, labor, contract services, project planning (including any site reviews, clearances and permits not previously completed), surveys, design, repair, rehabilitation, signage, accessibility retrofits and enhancements, energy conservation, inspections, corrective actions in response to facility audits, equipment rental, and contract supervision.

Output: Megawatts.	Unit of Measure: Nameplate megawatt capacity maintained. The nameplate megawatt capacity of a power facility is the total power production capacity estimated in the original facility design.
Inputs: Planned and funded maintenance projects/activities, labor, materials, equipment, contracts, facility review recommendations, required preventative maintenance and replacement of deficient fixed equipment and installed facilities, congressional authorization/directive, decision document, customer requests needed for above activities.	Cost Drivers: Policies, identified maintenance requirements, regulations, requests, number of facilities and/or facility components generating maintenance, catastrophic events, condition assessments, geographic location and site conditions, cost of technology, contract negotiations, accessibility of site, size of project, non-reimbursable costs, labor availability and specialty, frequency of use, age of facilities, accessibility of features requiring repair, ability to interfere with required releases, size complexity of facilities.

System Interfaces: At present, information will be gathered from Time and Procurement reporting. In the future, this data will be gathered from Bureau Facilities Management Systems.

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